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Disaster Mitigation Working in Massachusetts

High Marks for Building Higher: Hull's Freeboard Incentive Program



"Our community is in the top three highest number of repetitive-loss properties in the Commonwealth."

Anne Herbst
Hull's Conservation Administrator



Photo by Christopher Smith

Even prior to the introduction of the town's incentive program, many coastal residents of Hull have understood the need to build their homes up higher.

The Town of Hull, MA sits on a three-square-mile strip of land on the Nantasket Peninsula, extending into Massachusetts Bay. Despite its small size, it has one of



the largest population densities in the Commonwealth, averaging 11,000 year-round and swelling to 20,000 or more in the summer seasons. The high density has resulted in near-total development of all available land-space in the town.

Being on the bay, Hull is subject to frequent inundation from storms. Even mild wave action from seasonal storms called "Nor'easters" can cause significant damage to local properties, despite the protection of coastal banks and dunes, or even man-made defenses such as revetments and sea-walls. To date, the largest of these such storms, the Blizzard of 1978, filled the streets of Hull with water reaching depths of several feet, causing major damage to hundreds of buildings and homes throughout the town. Many of those same homes damaged in the Blizzard of '78 sustained considerable damage from a number of storms and floods over the years.

"Our community is in the top three highest number of repetitive-loss properties in the Commonwealth," said Anne Herbst, Hull's Conservation Administrator. "In the 30 years since the '78 Blizzard, we've had 23 coastal storms resulting in three or more flood claims to over 200 residential structures."

Because of restrictions in the Massachusetts building codes, local communities are unable to enforce stricter codes and ordinances than the state requires. This has resulted in towns and cities like Hull having to come up with creative forms of incentives to encourage the adoption of enhanced building techniques, such as the incorporation of freeboard. Put simply,

freeboard is the practice of elevating a structure's lowest floor, either during or after its construction, to a level higher than predicted flood levels for that area's base flood elevation (BFE). Many communities throughout the United States encourage, or even require, the use of freeboard of at least one foot higher than their local BFE.

In September 2009, with the encouragement of Herbst, based on research she had undertaken, Hull's Board of Selectmen unanimously approved a new program available to new and existing residential structures. For those who elect to incorporate two-feet of freeboard into the construction, they will receive a \$500 credit towards their permitting costs.

"Since we couldn't legally require people to build two feet higher, we had to find other alternatives" said Herbst. "So, we were looking into ways to move people in that direction, and this was considered to be a real attention grabber."

For those people who participate in the incentive program, there are a number of benefits beyond the \$500 credit to their permit costs. The first, and most obvious, is the peace of mind a homeowner will have knowing their home has a greater safety margin above possible future flood levels. Another financial boon from such a program, is the substantial savings that such a homeowner will see in their flood insurance costs. On average, an increase of two feet of freeboard in a V-zone will potentially result in flood insurance savings of almost 50%. For those structures built in an A-zone that incorporate the two feet of freeboard, the savings can be even greater.

The Town of Hull was recently selected as a recipient of the National Oceanic and Atmospheric Administration's (NOAA) 2010 Walter B. Jones Memorial Award for Excellence in Local Government. The award was presented to Hull in recognition of the town's efforts in coastal hazard management, with specific focus on their freeboard incentive program.

While the program is still new, and has only recently begun to spark interest with Hull's citizens, Herbst is confident that as



Photo by Christopher Smith

One of the first homes in Hull to participate in the freeboard incentive program.

word spreads, more and more people will consider participating. As residents who choose to elevate their house start seeing the benefits of such actions, their neighbors and friends will take notice.

"We're starting to get great feedback on this program," said Herbst. "We've received calls from other municipalities around the country interested in establishing their own incentive program. And it's really starting to grab the interest of our residents. They're taking note that in this troubled financial climate, the town is willing to rebate money in order to encourage residents to protect their property and their lives. The rebate may not be large compared to the cost of elevating a home, but it encourages people to take flood risks more seriously than they otherwise would."

V and A Zones: the V-Zone is referred to as the Special Flood Hazard Area (SFHA) with three of more feet of coastal wave action, and that will be inundated by a flood event having a 1-percent chance of being equaled or exceeded in any given year, and is also known as the 100-year flood plain. The A-Zone is an area still within the SFHA, but is considered at lower risk of flooding.



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